UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,792	08/29/2003	Sung-Kyung Jang	P-0577	1879

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EXAMINER
ROBERTS, BRIAN S

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

CS

	Application No.	**Applicant(s)**
Office Action Summary	10/650,792	JANG, SUNG-KYUNG
	Examiner	**Art Unit**	
	Brian Roberts	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *8/29/2003*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-31* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>29 August 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some * c)☐ None of:
       1.☒ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

- Claims 1-31 have been examined.

Specification

1.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

Claim Objections

2.   Claim 22 is objected to because of the following informalities:

- In claim 3 line 2, "thus" should be deleted.

- In claim 11 line 5, the colon after the period should be deleted.

- In claim 12 line 1, "entity is a radio link control (RLC)" should read -- entity is a

   radio link control (RLC) entity--.

- In claim 22 line 3, "transmitting RLC" should read --transmitting radio link

   control (RLC) entity--. Likewise, in lines 6 and 8 and the depending claims,

   "transmitting RLC" should read --transmitting RLC entity-- and "receiving

   RLC" should read --receiving RLC entity--.

- In claim 22 line 8, "thus" should be deleted or replaced with --then--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

4.   Claims 11-31 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

-   In reference to claim 11

In lines 4-5, the limitation "based on a processing speed of a receiving buffer"

renders the claim indefinite because a buffer is memory and does not have a

processing speed. For the purpose of examination, the Examiner assumes that the

limitation should read --based on a state of the receiving buffer--.

-   In reference to claim 22

In line 4, the limitation "checking a state of a stored receiving buffer by a

receiving PDU" does not make sense. For the purpose of examination, the Examiner

assumes that the limitation should read --checking a state of a stored receiving buffer by

a receiving RLC entity--.

-   In reference to claims 12-21 and 23-31

Claims 12-21 and 23-31 are rejected because they depend from independent

claims 11 and 22.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1-10 and 11-31, as best understood, are rejected under 35 U.S.C. 103(a)

as being unpatentable over ETSI TS 125 322 version 5.1.0 (2002-06) in view of Le et al.

(US 6744730)

-     In reference to claim 1

In Figure 4.4 and 9.10, ETSI TS 125 322 teaches a data transfer controlling

method in a radio system which transmits and receives data in an acknowledgement

mode that includes transmitting window size control information from a receiver to a

transmitter and varying a transmitting window size by the transmitter according to the

transmitted window size control information. (pg. 15 4.2.1.3.1.; 4.2.1.3.2; pg. 31

9.2.2.11)

ETSI TS 125 322 does not teach transmitting window size control information

from a receiver to a transmitter by a state of a receiving buffer.

In Figure 1, Le et al. teaches transmitting window size control information from a

receiving host (18) to a sending host (10) based on a state of a receiving buffer. The

receiving host (18) instructs the sending host (10) to increase the window size when the

receiving buffer is near empty and instructs the sending host (10) to decrease the

window size when the receiving buffer is near full. (column 2 lines 23-41)

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to modify the system and method of ETSI TS 125 322 to include

transmitting window size control information from a receiver to a transmitter by a state of

a receiving buffer as suggested by Le et al. because it allows the window size to be

varied in order to prevent buffer overflow or under utilization of network resources.

- In reference to claim 2

In Figure 4.4, ETSI TS 125 322 further teaches the transmitter is a network and

the receiver is a terminal. (pg. 15 4.2.1.3.1.; 4.2.1.3.2)

- In reference to claim 3, 14, 27

In Figure 9.10, ETSI TS 125 322 further teaches the window size control

information is contained in status information to be transmitted. (pg. 33 9.2.2.11.3)

- In reference to claim 4, 26

In Figure 9.10, ETSI TS 125 322 further teaches the window size control

information is a window size super-field (SUFI). (pg. 33 9.2.2.11.3)

- In reference to claim 5 16, 28-29

In Figure 9.10, ETSI TS 125 322 further teaches the status information further

includes an ACK SUFI. (pg 31 9.2.2.11)

- In reference to claim 6, 13, 23

In Figure 9.10, ETSI TS 125 322 further teaches the receiver adjusts a receiving window size to be the same as the transmitting window size. (pg. 33 9.2.2.11.3)

- In reference to claim 7, 8, 17-19, 24-25

ETSI TS 125 322 teaches a system and method that covers substantially all limitations of the parent claim.

ETSI TS 125 322 does not teach the window size control information includes window size downward setting information if a receiving buffer is in an overflow state.

In Figure 1, Le et al. teaches transmitting window size control information from a receiving host (18) to a sending host (10) based on a state of a receiving buffer. The receiving host (18) instructs the sending host (10) to increase the window size when the receiving buffer is near empty and instructs the sending host (10) to decrease the window size when the receiving buffer is near full. (column 2 lines 23-41)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the window size control information of ETSI TS 125 322 to include window size downward setting information if a receiving buffer is in an overflow state as suggested by Le et al. because it allows the window size to be varied in order to prevent buffer overflow.

- In reference to claim 9, 10, 20-21, 30-31

ETSI TS 125 322 teaches a system and method that covers substantially all limitations of the parent claim.

ETSI TS 125 322 does not teach the window size control information includes window size upward setting information if a receiving buffer is not in an overflow state.

In Figure 1, Le et al. teaches transmitting window size control information from a receiving host (18) to a sending host (10) based on a state of a receiving buffer. The receiving host (18) instructs the sending host (10) to increase the window size when the receiving buffer is near empty and instructs the sending host (10) to decrease the window size when the receiving buffer is near full. (column 2 lines 23-41)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the window size control information of ETSI TS 125 322 to include window size upward setting information if a receiving buffer is not in an overflow state as suggested by Le et al. because it allows the window size to be varied in order to prevent utilization of network resources.

-   In reference to claim 11

In Figure 4.4 and 9.10, ETSI TS 125 322 teaches a data transfer controlling method in a radio system which controls a flow of a radio link and includes an entity operated in an acknowledgement mode, wherein window size update information is transmitted from a receiving entity to a transmitting entity. (pg. 15 4.2.1.3.1.; 4.2.1.3.2; pg. 31 9.2.2.11)

ETSI TS 125 322 does not teach transmitting window size control information from a receiving entity to a transmitting entity based on a state of a receiving buffer

In Figure 1, Le et al. teaches transmitting window size control information from a receiving host (18) to a sending host (10) based on a state of a receiving buffer. The receiving host (18) instructs the sending host (10) to increase the window size when the receiving buffer is near empty and instructs the sending host (10) to decrease the window size when the receiving buffer is near full. (column 2 lines 23-41)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of ETSI TS 125 322 to include transmitting window size control information from a receiving entity to a transmitting entity based on a state of a receiving buffer as suggested by Le et al. because it allows the window size to be varied in order to prevent buffer overflow or under utilization of network resources.

-   In reference to claim 12

In Figure 4.4, ETSI TS 125 322 further teaches the entity is a radio link control (RLC). (pg. 15 4.2.1.3.1.; 4.2.1.3.2;

-   In reference to claim 15

In Figure 9.10, ETSI TS 125 322 further teaches the window size update information is a window size super-field (SUFI). (pg. 33 9.2.2.11.3)

- In reference to claim 22

In Figure 4.4 and 9.10, ETSI TS 125 322 teaches a data transfer controlling method in a radio data transfer of a mobile communication system that includes receiving a protocol data unit (PDU) from a transmitting RLC entity; transmitting window size control to the transmitting RLC entity and varying a transmitting window size according to the window size control information by the transmitting RLC entity and transmitting PDUs. (pg. 15 4.2.1.3.1.; 4.2.1.3.2; pg. 31 9.2.2.11)

ETSI TS 125 322 does not teach checking a state of a stored receiving buffer by a receiving RLC entity and transmitting window size control information according to a state of a receiving buffer.

In Figure 1, Le et al. teaches transmitting window size control information from a receiving host (18) to a sending host (10) based on a state of a receiving buffer. The receiving host (18) instructs the sending host (10) to increase the window size when the receiving buffer is near empty and instructs the sending host (10) to decrease the window size when the receiving buffer is near full. (column 2 lines 23-41)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of ETSI TS 125 322 to include checking a state of a stored receiving buffer by a receiving RLC entity and transmitting window size control information according to a state of a receiving buffer as suggested by Le et al. because it allows the window size to be varied in order to prevent buffer overflow or under utilization of network resources.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure are:

- Tourunen et al. (US 6930980) teaches data packet numbering in packet-switched

   data transmission.

- Jiang (US 6798842) teaches retransmission range for a communications

   protocol.

- Kalampoukas et al. (US 6438101) teaches a method and apparatus for

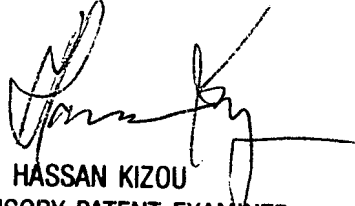   managing congestion within an internetwork using window adaptation.

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Brian Roberts whose telephone number is (571) 272-

3095. The examiner can normally be reached on M-F 10:00-7:30.

     If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BSR
05/06/2007

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